Meteorological Department (IMD) had predicted that the rainfall for the country as a whole for the month of July 2003 was likely to be 102% of Long Period Average (LPA) with a model error of ± 9%. The actual rainfall in July 2003 was 107% of LPA. Thus the Long Range Forecast of IMD was correct.

IMD had also predicted that the rainfall over the country as a whole in the southwest monsoon season (June-September) was likely to be 98% of LPA with a model error of ± 4%. This forecast can be verified only after the end of the monsoon season.

(b) No, Sir. International climate prediction centres are not always right in their prediction.The U.S. National Centre for Environmental Prediction, Washington D.C., in its seasonal prediction for June - July - August 2003 rainfall issued in May 2003 had indicated deficient rainfall over India, in that period. However, the actual rainfall over the country from 1 June to 6 August 2003 has been 106% of LPA.

(c) No, Sir. From 1988 to 2001, the country has received normal monsoon rainfall every year and this was correctly forecast by IMD with its 16-parameter statistical model. However, in 2002, IMD's forecast had a large deviation of 20% from the actual value.

(d) and (e) The 16-parameter model used by IMD was subjected to a thorough review and it Was found that some parameters had lost their statistical correlation with the monsoon rainfall over time. This model has now been replaced by an 8-parameter model which uses data upto March and a 10-parameter model which uses data upto June.The new parameters are well-correlated with the monsoon rainfall and are stable overtime.

From this year, IMD has also adopted probabilistic models, which give the probability of rainfall occurring in various categories *viz.,* drought, below normal, near normal, above normal and excess.

Assistance to Jharkhand for development of S&T

†3308. SHRI ABHAY KANT PRASAD: Will the Minister of SCIENCE AND TECHNOLOGY be pleased to state:

(a) whether Government have received proposals from Government of Jharkhand for development of Science and Technology in the State;

†Original notice of the question was received in Hindi

(b) if so, the details thereof; and

(c) the action taken or proposed to be taken by Government in this regard?

THE MINISTER OF STATE IN THE DEPARTMENT OF SCIENCE AND TECHNOLOGY IN THE MINISTRY OF SCIENCE AND TECHNOLOGY (SHRI BACHI SINGH RAWAT:) (a) Yes, Sir.

(b) and (c) A proposal for setting up a Sub-Regional Science Centre at Ranchi had been received from the State Government. The Centre will cost Rs. 5.00 crores. The Government of India has already released Rs. 1.50 crore in 2002-2003 to the National Council of Science Museum responsible for executing the project. The Government of Jharkhand has sanctioned an amount of Rs. 50 lakhs for this project and has allotted a land for this project at Chiroundi.

Jharkhand Government has sent a proposal to set up Software technology Park of India Centre (STPI Centre) at Ranchi. Department of Information technology, Government of India has approved the proposal of the Jharkhand Government to set up Software Technology Park of India Centre (STPI Centre) at Ranchi. The State Government of Jharkhand has confirmed availability of 3 acres of land, 3000 sq. ft. of built up space and grant-in-aid of Rs. 100 lakh for setting up of Software Technology Park of India Centre (STPI Centre).

Department of Space, Government of India has provided technical support as well as financial grant of Rs. 1.00 crore towards establishment of Jharkhand Space Application Centre at Ranchi.

Development of Sree Chitra Thirunal Institute for Medical Sciences & Technology

3309. SHRI THENNALA G. BALAKRISHNA PILLAI: Will the Minister of SCIENCE AND TECHNOLOGY be pleased to state:

(a) whether Government have any proposal for development of Sree Chitra Thirunal Institute for Medical Sciences and Technology, Thiruvananthapuram;

(b) if so, the details thereof; and

(c) the total number of heart-patients registered for open heart surgery up to June 2003?